Research Engineering Internship Experience

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STEP Project Category: Internship
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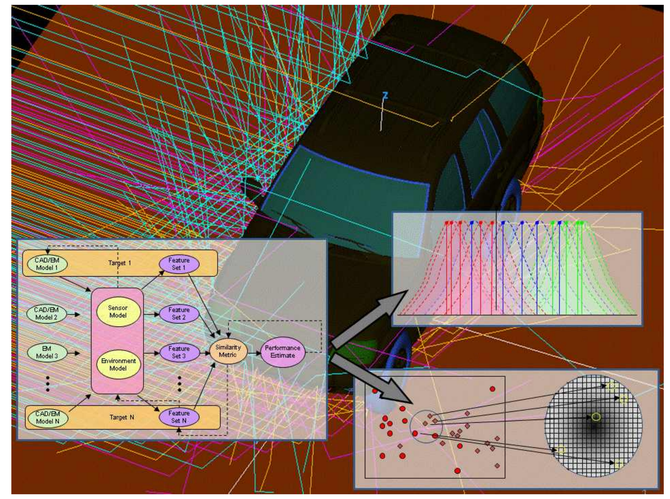
Major: Mechanical Engineering

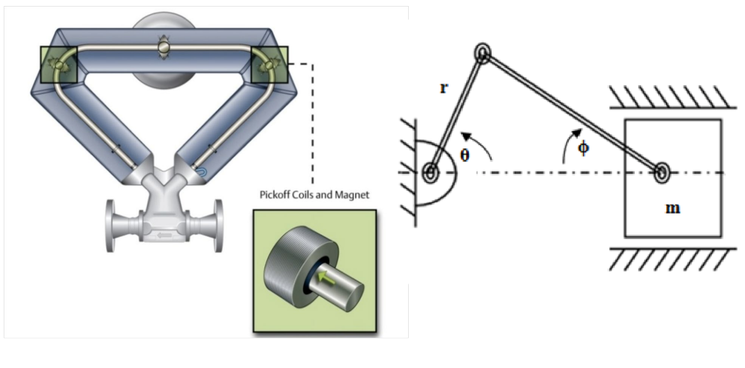
Why I chose this internship

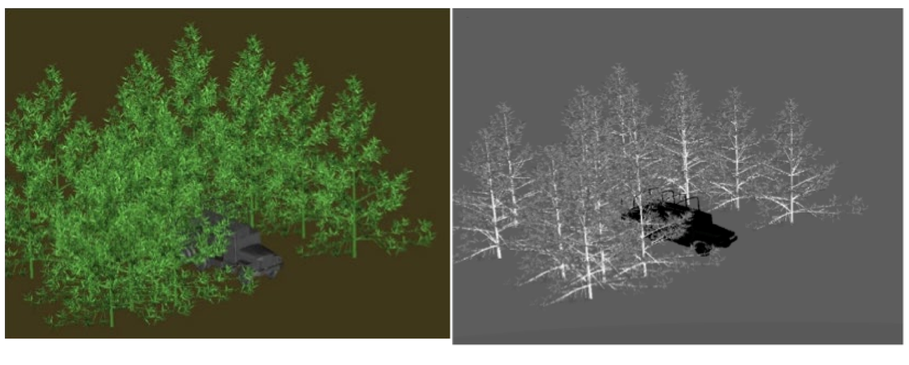
- I chose this internship to understand how the research is done in professional setting and gain relevant skills and knowledge for my undergraduate research.
- This internship guaranteed flexibility, exposure to various aspect of engineering, and hands-on work, which were the three things I desired.

Project Description

- My signature project was a 12-week long research engineering internship with Etegent Technologies
- Etegent Technologies, Ltd., is a high technology, R&D focused company conducting state-of-the-art research in a range of areas
- My daily responsibilities were running tests and simulations, writing MATLAB program for various applications, communicate with the vendors, building prototypes, and more.







What I Learned

- I learned a lot about signal processing and data analysis.
- I learned about how different sensors and measurement devices (e.g. accelerometers, motion detectors, current clamps, piezo-electric sensors, etc.) work and used to understand a multi-degree motion system.
- I learned how to do harmonic/modal analysis in ANSYS
- I learned how to make graphical user interface (GUI) using MATLAB.

Favorite parts of my experience

- Flexibility was the big catch in this experience. I was able to participate a little bit in various projects running at the time and broaden my knowledge in different fields of engineering.
- Exposure to different software such as MATLAB, Solidworks, and ANSYS allowed me to get a full grasp of how to use them
- I didn't just get to sit down in front of a computer but also do some hands-on work of building prototypes, working on wiring circuits and junction boxes, machining metals and more.

Transformation Impacts

- This project definitely widened my perspective for how the engineering applies in the real world
- I learned how to work individually and in teams, and how to thrive in both settings as an engineer.
- Before, there were some academic knowledge I gained throughout my undergraduate career that I didn't fully understand the application of. This internship experience clarified how to exploit the skills and knowledge learned from school and utilize them in professional settings.
- My interpersonal skills have improved through communicating with co-workers, other subject matter experts, vendors, and customers.